

Attorney's Docket No.: 13452-002001  
Client's Ref. No.: PH-709US

**OFFICIAL COMMUNICATION**

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**FOR THE PERSONAL ATTENTION OF:**

**GROUP 1600**

**EXAMINER BETTY J. FORMAN, PH.D.**

**GROUP 1655 FAX NO: 703 308-4242**

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Number of pages including this page 14

Applicant : Ito et al.  
Serial No. : 09/451,666  
Filed : November 30, 1999

Art Unit : 1655  
Examiner : Betty J. Forman, Ph.D.

**FACSIMILE COMMUNICATION**

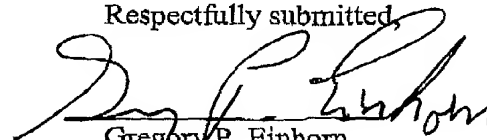
Title : METHODS FOR PRODUCING BIOCHIPS (amended)

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Attached to this facsimile communication cover sheet is a copy of an Information Disclosure Statement (without references) filed with the USPTO on August 28, 2000 faxed this 7<sup>th</sup> day of November, 2002, to Group 1655, the United States Patent and Trademark Office.

Respectfully submitted,



Gregory P. Einhorn  
Reg. No. 38,440

Date: November 7, 2002

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PATENT  
ATTORNEY DOCKET NO.: 07898-051001

The Patent and Trademark Office date stamp sets forth the date of receipt of:

Applicant or Patentee Ita ital.

No. (Application, Appeal, Interference, Patent, Reexam) 09/451, 026

Filing or Issue Date 11/30/99

Title: Breeding a Method of Producing the Same

☐ Transmittal Letter (2 Copies) ☐ With Pet. for Ext.

☐ Assignment ☐ Status Inquiry

☐ Amendment/Response ☐ Declaration

☐ Maintenance Fee ☐ Request Certificate of Correction

☐ Check \$ 3000

☐ Deposit Account Order Form (2 Copies) ☐ Notice of Appeal

☐ Issue Fee ☐ Request Patent Copies ☐ Appeal Brief (3 Copies) Pages

☒ Information Disclosure Statement ☐ Petition for Extension Time

☒ PTO 1449 Form. Pages

☐ Prior Art References-Number of References 10

☐ Drawings 10 Sheets Formal 10 Sheets Informal 10 Sheets Amended

☐ Notice of Missing Parts

☐ Combined Declaration and Power of Attorney

☐ Small Entity Statement

☒ Other Copy of European Search Rpt.

Atty/Sec FRB Client/  
Initials FRB Matter Name Ita ital. Date 8/28/00

Attorney's Docket No.: 07898-051001  
Client Ref. No.: PH-709US

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ito *et al.* Art Unit : 1655  
Serial No. : 09/451,666 Examiner : B. Forman  
Filed : November 30, 1999  
Title : BIOCHIP AND METHOD FOR PRODUCING THE SAME

Commissioner for Patents  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449, copies of which are enclosed. A copy of a communication from a foreign patent office in a counterpart application is also enclosed.

Submitted herewith is an English translation of the following foreign language references, or portions thereof:

Desig. ID	Source
AL	DE 2852886

This Statement is being filed after a first Office Action on the merits, but before receipt of a final Office Action or a Notice of Allowance. I, the undersigned, hereby certify that each item of information contained in this statement was cited in a communication from a foreign patent office in a counterpart foreign application, the communication being dated June 20, 2000, which is not more than three months prior to the filing of this Statement.

Applicants do not believe that any fees are due with this Statement. If, however, it is determined that fees are owed, please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 8/28/00

Robert M. Bedgood  
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I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

August 28, 2000  
Date of Deposit

Sheet 1 of 1

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 07898-051001	Application No. 09/451,666
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Ito <i>et al.</i>	
		Filing Date November 30, 1999	Group Art Unit 1655

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,557,213	Sep. 17, 1996	Reuter <i>et al.</i>			
	AB	5,457,041	Oct. 10, 1995	Ginaven <i>et al.</i>			
	AC	5,262,128	Nov. 16, 1993	Leighton <i>et al.</i>			
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AL	DE 2852886*	Jun. 19, 1980	Germany				
	AM	WO 00 01798	Jan 13, 2000	PCT				
	AN	WO 99 05308	Feb 4, 1999	PCT				
	AO	WO 99 04896	Feb. 4, 1999	PCT				
	AP	WO 98 20020	May 14, 1998	PCT				
	AQ	WO 98 20019	May 14, 1998	PCT				
	AR	WO 97 43447	Nov. 20, 1997	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AS	
	AT	
	AU	

\* This reference is written in German; an English translation of the claims is submitted herewith.

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Disclosure Form (PTO-1449)



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### Europäisches Patentamt

Zweigstelle  
in Den Haag  
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### European Patent Office

Branch at  
The Hague  
Search  
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### Office européen des brevets

Département à  
La Haye  
Division de la  
recherche

☐ Liesegang, Roland, Dr.-Ing.  
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80801 München  
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Datum/Date

20.06.00

Zeichen/Ref./Ref. FB 8785	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°. 99123786.8
Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire Hitachi Software Engineering Co., Ltd.	

## COMMUNICATION

The European Patent Office herewith transmits

- ☒ the European search report
- ☐ the declaration under Rule 45 EPC
- ☐ the partial European search report under Rule 45 EPC
- ☐ the supplementary European search report concerning the international application under Article 157(2) EPC relating to the above-mentioned European patent application. Copies of the documents cited in the search report are enclosed.

The following specifications given by the applicant have been approved by the Search Division :

- ☐ Abstract ☐ Title ☐ Figure
- ☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.
- ☐ The following figure will be published with the abstract, since the Search Division considers that it better characterises the invention than the one indicated by the applicant.

Figure:

- ☒ Additional copy(copies) of the documents cited in the European search report.

## REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 99 12 3786

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
P,X	EP 0 908 725 A (SEIKO EPSON) 14 April 1999 (1999-04-14) * claims 1,5,6 * * column 2, line 43 - line 49 * * column 4, line 32 - column 5, line 22 *	1-7	G01N33/543 C12Q1/68 B01L3/02
P,X	EP 0 895 082 A (CANON KK) 3 February 1999 (1999-02-03) * page - *	1-7	
X	EP 0 469 445 A (BOEHRINGER MANNHEIM GMBH) 5 February 1992 (1992-02-05) * claims *	1-7	
Y	* page 2, line 34 - page 3, line 2 * * page 4, line 5 - line 16 *	1-7	
P,X	WO 99 57323 A (BAYLOR COLLEGE MEDICINE) 11 November 1999 (1999-11-11) * claims 31-41,44 * * page 7, line 9 - line 30 * * example 3 * * figure 3 *	1-7	
P,X	WO 99 07888 A (BULYK MARTHA L ;CHURCH GEORGE M (US); HARVARD COLLEGE (US)) 18 February 1999 (1999-02-18) * claims 1-15 * * page 12, line 27 - page 13, line 16 *	1-7	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G01N C12Q B01J B01D B01L
X	US 4 591 570 A (CHANG TSE-WEN) 27 May 1986 (1986-05-27) * claims 1-16 * * column 3, line 31 - line 55 *	1-7	
-/--			
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 31 May 2000	Examiner Routledge, B
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03/92 (P04031)



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 99 12 3786

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
✓ X	SCHEMA M ET AL: "Microarrays: biotechnology's discovery platform for functional genomics" TRENDS IN BIOTECHNOLOGY, GB, ELSEVIER PUBLICATIONS, CAMBRIDGE, vol. 16, no. 7, 1 July 1998 (1998-07-01), pages 301-306, XP004145643 ISSN: 0167-7799	1-7	
Y	* page 303 - page 304 *	1-7	
✓ X	O'DONNELL-MALONEY M J ET AL: "Microfabrication and array technologies for DNA sequencing and diagnostics" GENETIC ANALYSIS: BIOMOLECULAR ENGINEERING, US, ELSEVIER SCIENCE PUBLISHING, vol. 13, no. 6, 1 December 1996 (1996-12-01), pages 151-157, XP004017264 ISSN: 1050-3862	1-7	
Y	* page 153 - page 154 *	1-7	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
✓ E	WO 00 01798 A (CARTESIAN TECHNOLOGIES INC) 13 January 2000 (2000-01-13) * claims 1-12 * * figure 1 * * page 3, line 19 - line 28 * * page 5, line 5 - line 8 *	8-12	
✓ P, X	WO 99 05308 A (TABONE JOHN C ; RAPIGENE INC (US); MOYNIHAN KRISTEN (US); NESS JEFF) 4 February 1999 (1999-02-04) * figures 2A,,2B,,4A,4B * * page 6, line 11 - line 20 * * page 9, line 3 - line 13 * * page 10, line 22 - page 11, line 3 * -/-	8-12	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 31 May 2000	Examiner Routledge, B
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03/82 (P04/C01)



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 99 12 3786

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
✓ P, X	WO 99 04896 A (TABONE JOHN C ; RAPIGENE INC (US); MOYNIHAN KRISTEN (US); NESS JEFF) 4 February 1999 (1999-02-04) * claims 30, 59 * * figures 2A, 2B, 4A, 4B * * page 4, line 11 - line 20 * * page 12, line 5 - line 21 * * page 13, line 6 - line 16 * * page 14, line 25 - page 15, line 6 *	8-12	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
✓ X	WO 98 20020 A (KOSTER HUBERT ; LITTLE DANIEL P (US); SEQUENOM INC (US); CANTOR CHA) 14 May 1998 (1998-05-14) * claims * * page 5, line 1 - line 12 * * page 13, line 14 - line 17 * * page 53, line 21 - page 54, line 11 *	8-12	
✓ X	WO 98 20019 A (REUTER DIRK ; HIGGINS G SCOTT (DE); LOUGH DAVID M (GB); KOESTER HUB) 14 May 1998 (1998-05-14) * figures 9A-9E * * page 5, line 28 - page 6, line 4 * * page 19, line 11 - line 17 *	8-12	
✓ X	WO 97 43447 A (HARVEY THOMAS B III ; ACKLEY DONALD E (US); MARACAS RICHARD (US); M) 20 November 1997 (1997-11-20) * claims * * figures 11, 12 * * page 11, line 21 - page 12, line 11 *	8-12	
✓ X	US 5 557 213 A (REUTER MARK S ET AL) 17 September 1996 (1996-09-17) * claims * * figures 2-7 * * column 5, line 16 - column 6, line 50 *	8-12	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 31 May 2000	Examiner Routledge, B
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03/02 (P05C01)





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 99 12 3786

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 457 041 A (GINAVEN ROBERT O ET AL) 10 October 1995 (1995-10-10) * claims 6-10 * * figures 1,,4A,,4B * * column 4, line 11 - line 21 * * column 6, line 35 - line 44 *	8-12	
X	US 5 262 128 A (LEIGHTON STEPHEN B ET AL) 16 November 1993 (1993-11-16) * claims 10-12 * * figure 6 * * column 2, line 42 - line 45 * * column 7, line 22 - line 30 *	8-12	
X	DE 28 52 886 A (FEINMETALL GMBH) 19 June 1980 (1980-06-19) * claims * * figures 1-4 *	8-12	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			

2

EPO FORM 1503 03/82 (P04C01)

Place of search THE HAGUE	Date of completion of the search 31 May 2000	Examiner Routledge, B
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>		



European Patent  
Office

**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 99 12 3786

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-7

Biochip comprising an array of probes spotted onto a surface wherein the binding agent used to bind the probe is only spotted at the same locations on the surface as the probes.  
Methods for making said biochip.

2. Claims: 8-12

Pin having a recessed end, said recess taking the form of a concave shape, groove or radially shaped groove. Method of making biochip using said pin.



European Patent  
Office

Application Number

EP 99 12 3786

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet 8

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

# ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 99 12 3786

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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31-05-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 908725 A	14-04-1999	JP 2000033712 A CA 2248517 A	02-02-2000 30-03-1999
EP 0895082 A	03-02-1999	JP 11187900 A	13-07-1999
EP 0469445 A	05-02-1992	DE 4024544 A AT 138197 T AU 635143 B AU 8116791 A CA 2047637 A DE 59107805 D FI 913668 A IL 99043 A JP 2607320 B JP 4262256 A NO 913000 A NZ 239060 A PT 98514 A US 5378638 A ZA 9106054 A	06-02-1992 15-06-1996 11-03-1993 06-02-1992 03-02-1992 20-06-1996 03-02-1992 27-11-1995 07-05-1997 17-09-1992 03-02-1992 26-03-1993 30-09-1993 03-01-1995 29-04-1992
WO 9957323 A	11-11-1999	US 6048695 A AU 3786199 A	11-04-2000 23-11-1999
WO 9907888 A	18-02-1999	AU 8588498 A EP 1003912 A	01-03-1999 31-05-2000
US 4591570 A	27-05-1986	AT 77699 T DE 3485785 A DE 3485785 T EP 0135541 A JP 60500732 T WO 8403151 A	15-07-1992 30-07-1992 24-12-1992 03-04-1985 16-05-1985 16-08-1984
WO 0001798 A	13-01-2000	AU 4861099 A	24-01-2000
WO 9905308 A	04-02-1999	AU 8504598 A EP 0996500 A	16-02-1999 03-05-2000
WO 9904896 A	04-02-1999	AU 8582598 A EP 0998347 A	16-02-1999 10-05-2000
WO 9820020 A	14-05-1998	US 6024925 A AU 5106998 A AU 5198098 A DE 19782095 T	15-02-2000 29-05-1998 29-05-1998 23-03-2000

EPO FORM P4538

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

# ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 99 12 3786

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31-05-2000

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9820020	A		DE 19782096 T	23-03-2000
			EP 0954612 A	10-11-1999
			EP 0937096 A	25-08-1999
			NO 992168 A	06-07-1999
			NO 992169 A	06-07-1999
			WO 9820166 A	14-05-1998
			AU 5247298 A	29-05-1998
			DE 19782097 T	14-10-1999
			EP 0937097 A	25-08-1999
			NO 992167 A	05-07-1999
			WO 9820019 A	14-05-1998
WO 9820019	A	14-05-1998	US 5900481 A	04-05-1999
			US 6024925 A	15-02-2000
			AU 5106998 A	29-05-1998
			AU 5247298 A	29-05-1998
			DE 19782095 T	23-03-2000
			DE 19782097 T	14-10-1999
			EP 0954612 A	10-11-1999
			EP 0937097 A	25-08-1999
			NO 992167 A	05-07-1999
			NO 992168 A	06-07-1999
			WO 9820166 A	14-05-1998
			AU 5198098 A	29-05-1998
			DE 19782096 T	23-03-2000
			EP 0937096 A	25-08-1999
			NO 992169 A	06-07-1999
			WO 9820020 A	14-05-1998
WO 9743447	A	20-11-1997	US 5731152 A	24-03-1998
			AU 2250297 A	05-12-1997
			BR 9702230 A	23-02-1999
			CA 2226662 A	20-11-1997
			CN 1193358 A	16-09-1998
			FR 2748568 A	14-11-1997
			GB 2317180 A	18-03-1998
			US 6048691 A	11-04-2000
			US 6013446 A	11-01-2000
US 5557213	A	17-09-1996	NONE	
US 5457041	A	10-10-1995	NONE	
US 5262128	A	16-11-1993	AU 6640190 A	16-05-1991
			EP 0497885 A	12-08-1992
			WO 9105519 A	02-05-1991

EPO FORM P439

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 99 12 3786

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31-05-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2852886 A	19-06-1980	NONE	

EPO FORM P0-59

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82